

Notice of Allowability

Application No.

09/826,329

Examiner

Ted M. Wang

Applicant(s)

MOWER ET AL.

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/07/2005.
2. ☒ The allowed claim(s) is/are 1-4, 6-11, 13 and 14.
3. ☒ The drawings filed on 07 February 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 7/22/2005.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Examiner's Statement

1. Applicant's arguments, filed on 02/07/2005, with respect to claims 1-4, 6-11, 13, and 14 have been fully considered and are persuasive. The rejection of 35U.S.C.103(a) has been withdrawn.

Examiner Amendments

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendment was given in a telephone interview with Agent Joseph Gamberdell, Jr. on July 15, 2005.

4. The application has been amended as follows:

5. In the claims:

□ In claim 1, change the claim 1 as following --

1. A coherent radio frequency ("RF") digital data communication system for mitigating the loss of digital data among segments of a transmitted message following the trailing edge of a jamming ("J") pulse that strikes a transmitted message, the system comprising the following elements, in combination,
a transmitter (Tx3) having multiple digital data processing elements including a forward error correcting ("FEC") encoder (Tx3c), an interleaver ("I") (Tx3d) and a differential decoder ("DE") (Tx3e), aligned with an outward path

from one element to the next traveled by a message for preparing the message for processing by complementary processing elements at a receiver (Rx4) to which the transmitted message is addressed, wherein the receiver (Rx4) further comprising

~~a receiver having multiple, digital data processing elements that are the~~ complements to those of the transmitter (Tx3) including a FEC decoder (Rx4f), a de-interleaver ("DI") (Rx4e) and a differential data decoder ("DDE") (Rx4d) within a path for processing an incoming digital data message having lost a data segment to a J pulse during transmission,

~~the receiver further including an AGC circuit having a burst clamp that~~ operates to protect AGC components from saturating while the J pulse strikes the transmitted message to enable the receiver to recover coherence with an incoming message following the trailing edge of the J pulse,

wherein, the DDE (Rx4d) synchronizes with either incoming data bit pairs, or inverted data bit pairs, among remnant segments of ~~a~~ the message following the trailing edge of an expired J pulse that struck ~~a~~ the transmitted message and incoming inverted data bit pairs, allowing the DDE (Rx4d) to sequentially process received remnant data segments of ~~a~~ the message created by the J pulse thereby allowing the DI (Rx4e) and the FEC decoder (Rx4f) to sequentially process the received remnant data segments. ---

- In claim 2, line 4, change "Rx3d" to --- Rx4d ---.

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- In claim 3, line 4, delete "receiver" and change "a" to -- the -- and line 5, change "DDE" to -- SSDM Rx4c --.
- In claim 4, line 3, change "en" to -- an -- and insert -- Tx3b -- before "couple", line 4, change "Tx3e" to --Tx3c --, and line 8, change "Rx4e" to -- Rx4f --.
- In claim 7, line 3, change "dispreading" to --despreading --, line 4 delete "is", and line 5, change "a" to -- the -- before "J pulse".
- In claim 8, change the claim 8 as following --

8. A coherent radio frequency ("RF") digital data communication method for mitigating the loss of digital data among segments of a transmitted message following the trailing edge of a jamming ("J") pulse that strikes a transmitted message, the method comprising the following combination of steps,

at a transmitter (Tx3),

forward error correcting ("FEC") encoding (Tx3c), interleaving ("I") (Tx3d) and differential encoding ("DE") (Tx3e) a message for preparing a the message for processing ~~at a receiver Rx4~~,

at a receiver Rx4,

receiving the transmitted message for correcting data errors within ~~the~~ a received message by performing complementary steps to those performed on the message at the transmitter (Tx3) including differential data decoding ("DDE")

(Rx4d), de-interleaving ("DI") (Rx4e) and forward error correcting ("FEC")
decoding (Rx4f) the received message, and

recovering incoming message data including remnant message data of a
the message hit by a the J pulse by performing the DDE step near the output of
receiver Rx4b by synchronizing with incoming data bit pairs and inverted data bit
pairs thereby synchronizing rapidly to the incoming message at each down
stream element, and by burst clamping an AGC circuit in the receiver to protect
AGC components from saturating while the J pulse strikes the transmitted
message for enabling recovery coherence with an the incoming message
following the trailing edge of the J pulse. ---

- In claim 9, lines 4-5, replace "of the message" with --- step ---.
- In claim 10, line 4, delete --- the --- before "transmitting".
- In claim 11, change the claim 11 as following ---

11. The coherent RF digital data communication method of claim 8 including the
steps at the transmitter (Tx3) of multiplexing a the message at multiplexer
("MUX") Tx3a and encrypting ("ENCRYPT") (Tx3b) the message prior to
transmitting the message to the receiver (RX4) and at the receiver (Rx4) de-
encrypting the received message and de-multiplexing the message. ---

Allowable Subject Matter

6. Claims 1-4, 6-11, 13, and 14 are allowed.
7. The following is an examiner's statement of reasons for allowance.

- The prior art fails to teach an apparatus/method of Claims 1-4, 6-11, 13, and 14 that specifically comprises the following:
 - The instant application is deemed to be directed to a non-obvious improvement over the admitted prior art of the instant application and the invention patented in Pat. No. 3,936,599, 5,826,175. The improvement comprises that the receiver further including an AGC circuit having a burst clamp that operates to protect AGC components from saturating while the J pulse strikes the transmitted message to enable the receiver to recover coherence with an incoming message following the trailing edge of the J pulse, wherein the DDE synchronizes with either incoming data bit pairs, or inverted data bit pairs, among remnant segments of a message following the trailing edge of an expired J pulse that struck a transmitted message and incoming inverted data bit pairs, allowing the DDE to sequentially process received remnant data segments of a message created by the J pulse thereby allowing the DI and the FEC decoder to sequentially process the remnant data segments.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. Reference US 6,233,712 and US 2003/0099288 are cited because they are put pertinent to the radio communication with AGC. However, none of references teach detailed connection as recited in claim.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is (571) 272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Ted M Wang

Examiner

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Ted M. Wang

SHUWANG LIU
PRIMARY EXAMINER